W1TKZ

The Spark Gap

SEPTEMBER 1981

Book VII Vol IX

Official Journal of the Wellesley Amateur Radio Society

YEAR 30

Yes indeed, this year marks the 30th anniversary of the founding of the Wellesley Amateur Radio Society. When founded in 1951 and for many years after, the club was made up of a small but loyal group of local hams but some five years ago, the club became much larger and more active with eighty or more members the norm for the past few years. The club has, of course, been very active these past years, too, having become involved with the Boston Marathon, and the Natick Mall Message Fair, to name just two of our bigger activities.

To celebrate this anniversary, we will be holding a special meeting on the third Thursday of September, a "Tri-Deca-Fest" (third decade festival) with a line-up of special events. These will include a showing of the new ARRL film "World of Amateur Radio", a slide show on some of the clubs recent activities, information on the upcoming year's activities and more. Dave Kent, N2AWG, will be making a special "Tri-Deca-Cake" as part of the refreshments, and there will be two door prizes. For those who are not yet licensed, there will be a Heath training course, and for everyone else there will be an Astatic D-104 microphone.

This event is planned as a celebration for the old club members and as an opportunity to make the club known to new hams in the area. Fliers will be distributed to area electronics stores to advertize and all members are urged to talk it up amoung prospective hams and others who are not members of WARS.

Help us start off the 1981/82 club year with a bang. Set aside the evening of September 17 and plan on attending the WARS "Tri-Deca-Fest". Doors open at 7:00 pm and the activities will begin around 7:30 pm. □

ACTIVITIES

The summer of 1981 was certainly not without activities for the Wellesley Amateur Radio Society. Three busy contests kept W1TKZ on the air, starting with the June VHF QSO Party on June 13-14, followed by the ARRL Field Day on June 27-28 and finally the UHF Contest on August 8-9. Details of all these activities are inside this issue.

Mort Cohan, KA1IU, operating 80M at Field Day. More on FD inside.

MEETINGS THIS MONTH:

September 3, 1981 at 7:30 pm

September 17, 1981 at 7:30 pm

Intermediate Bldg., Wellesley Hills, Mass.

Executive Minutes

Meeting of June 2, 1981:

The meeting was opened at 8:12 pm by President David Curry, K1TK.

Several suggestions were made to improve the generator. A large, permanently mounted fuel tank was suggested but decided against, and a spare tire was suggested and recommended as something to look for.

VHF Contest organization was discussed. It was decided we need better preparation to avoid the last minute rush of packing equipment.

Field Day planning was the final topic of the evening.

The meeting was closed at 11:05pm.

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Meeting of July 21, 1981:

The meeting was opened at 7:37 pm by President David Curry, K1TK.

The calendar of events for the next club year was laid out.

The budget for 1981/82 was discussed and allocations for each account were proposed.

The meeting was closed at 10:21 pm.□

Minutes

Meeting of June 4, 1981:

The meeting was opened at 7:56 pm by President David Curry, K1TK.

The secretary's report was read and accepted.

The treasurer's report was read.

A reminder was made about the upcoming VHF Contest.

A reminder about Field Day was also made.

It was announced that the next meeting would be an informal planning session for Field Day preceeded by a pizza party.

Jim Hatherley, WA1TBY, made some comments on the proposed "Plain Language" rewrite of the FCC rules, and reminded everyone about the upcoming ARRL dues increase.

Bill Hanlon, N1ADY, volunteered to head a committee to look into the club by-laws. The meetings will be open to all and held just before the regular club meetings.

Mort Cohan, KA1IU, briefly told about the new Amateur satellite, UoSAT, which will be launched during September.

The meeting was closed at 8:38 pm.

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Meeting of July 16, 1981:

The meeting was opened at 8:02 pm by President David Curry, K1TK.

The secretary's report was read and accepted.

A vote was taken on final disbursement of bills for Field Day and the VHF Contest.

C.J. McDonald, WB1BUM, reported that $56.33 had been spent for the new generator battery and other accessories.

The corresponding secretary was directed to send a letter of thanks to the Martha's Vineyard selectmen for allowing us the use of our Field Day site.

The treasurer's report was made.

The meeting was closed at 8:55 pm.□

"New Tickets"

Congratulations to the last of our Novice class members to receive their licenses. They are Val Descamps, KA1HEM, Dave McLellan, KA1HCM, and Mike Mancuso, KA1HIV. Val Descamps is still trying to decide what he wants to do for a rig. The others have old rigs and are being helped by Henry McDade, W1LMU (KA1HCM), and Mark Corio, KA1DHQ (KA1HIV).

OFFICIAL BULLETIN

Nr 74, dated July 9, 1981:

The FCC has voted to adopt a Notice of Inquiry and Notice of Proposed Rulemaking looking toward permitting Advanced and Amateur Extra class licensees to experiment with spread spectrum techniques on the 50 MHz, 144 MHz and 220 MHz bands without the necessity of obtaining special authority from the Commission. The wording of the proposal, General Docket 81-414, has not yet been released to the public. However, the Commission expects the document to be published

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

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CHESTNUT HILL, MASS. 02167
323-5029

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SENT THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS $8. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181

within the next two weeks. Details will appear in QST.

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Nr 77, dated July 23, 1981:

The Federal Communications Commission has proposed allowing inland expansion of nongovernment radiolocation operations in the 420 to 450 MHz band by Pulse Ranging Systems, including those using spread spectrum technology, in General Docket 80-135. Comments are due by September 21, 1981, with replies by October 21, 1981. In other action, FCC released a Notice of Inquiry looking toward allowing Amateur Extra and Advanced Class licensees the use of spread spectrum on the 50, 144 and 220 MHz bands without need of special authorization in General Docket 81-414. The Commission also served notice that it is continuing its investigation in the matter of radio frequency interference to electronic equipment by releasing a Further Notice of Inquiry in General Docket 78-369. Details to follow in QST.

Nr 78, dated July 24, 1981:

FCC Chairman Fowler has announced appointment of James McKinney to be Chief, Private Radio Bureau, replacing Carlos Roberts who resigned effective September 1, 1981, to enter the business world. Richard M. Smith, WA4AMX, will replace McKinney as Chief, Field Operations Bureau. At present, Smith is Deputy Chief. In his present position, Mr. McKinney has demonstrated an understanding of and sensitivity toward the problems of the Amateur Service. □

Auctions/Flea Markets

September 27: NEAT Group Flea Market at Freeport Hall, Freeport Street, Dorchester, Mass. Admission is $1.00 for buyers and $5.00 for sellers. Held from 9:00 am to 3:00 pm.
October 10: Our own Wellesley Amateur Radio Society tailgate fleamarket, at Wellesley High School parking lot, on Rice Street (just off Rt. 16). Admission is $1.00 for all, buyers and sellers. We will open at 9:00 am and talk-in will be on 147.63/03. □

hr REPORT

Jamming jammers has brought a license suspension to N5FX, a Wichita Falls, Texas, Extra. N5FX, a member of the Maritime Mobile Service Net, was heard May 30 and 31 by FCC monitors as he interfered with W1GM and K4MME. Those are the two Amateurs whose licenses were suspended June 4 for having allegedly jammed the Maritime Mobile Service Net over a period of months.

hr Report, August 7, 1981

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UoSAT is still on target for launch from Vandenberg AFB September 15, with launch window opening at 0941Z. The UoSAT launch crew, headed by G3YJO, is due in California at the end of August for final preparations.

hr Report, August 7, 1981□

VHF CONTEST

by Nels J. Anderson, K1UR

Murphy must have slept through the weekend of June 13 and 14 as this year's running of the ARRL June VHF QSO Party went as smoothly as it possibly could. After arriving Friday night and getting a good nights sleep (?) set up began early Saturday morning and before long four towers, three tents, and all the stations were ready to go. Then we had to wait almost two hours for the contest to begin as, for the first time, we were actually early completing the set up of equipment.

Once operation began, it was apparent that it would be a good weekend. Contacts were made in large numbers right from the start with no real slowdown after the first couple of hours as usually happens. Then conditions got better.

Several hours into the contest 6 meters really opened up and did not close down for the rest of the weekend. As a result, we got our first taste of how 6 can be when it is really good. All weekend, stations from the far parts of the continent would pop in and out, often just long enough to make a contact (and sometimes, just not quite long enough). The result of this was a fantastic total on 6, with all ten call areas worked, 40 states, 2 Canadian provinces, and even the Bahamas. This of course meant a big increase in our overall score as 6 meters is the only place where really big multiplier totals can be racked up.

This is not to say that the other bands were not hopping too. On 2 meters we also made a significant improvement over all our previous efforts. We worked all the surrounding sections and as far west as Ohio, something we have never been able to do before though we have often listened to the "big guns" in the area doing it. On 220 MHz, our totals remained about the same due to a problem with the CW transmitted, the only thing that went wrong all weekend. On 432 and 1296 we made improvements over all previous contests, and we had our one token contact on 2304.

The new 10 GHz Gunnplexers put together by K1TK and K1UR provided some interesting operation and three additional contacts in three states. Our best result here was a contact with W2SZ/1 on Mt. Greylock about 36 miles away. The Gunnplexer expedition WA1YOJ and AF1M took to try to find a spot in New York made the best story of the weekend. They set out on Sunday afternoon after the fog had set in obscuring the view from the mountain. After looking for a clear spot along a road which runs just over the New York border, they set out to find a fire tower which was supposed to have a clear view of Mt. Equinox. The tower was found in short order, but had a fence preventing access to it. However, a house was right next to it, and being the only house around, they figured maybe the owner had something to do with the tower. They knocked on the door and after explaining their case, the owner suggested that his balcony had a nice view of the mountain and why don't they go there. A contact was made in short order from the balcony with the sounds of a seemingly large mob of kids yelling in the background!

Anyway, down to the detailed results. On 6 meters, we used our old standard station, consisting of an FT625RD, SB-220 amp, and 5 element yagi. On 2, we had the TS-700S, homebrew amp, and a new antenna arrangement consisting of a pair of 11 element Cushcraft yagis. On 220 FM a Midland transceiver and 8 element yagi were used, on 432 the old homebrew transmitter and K10GF's receiving system were used into a 15 element yagi. On 1296 and 2304 W100P homebrew equipment was used as always into the five foot dish and on 10 GHz the new Gunnplexers were used. This gave us a score as follows:

BAND	QSOs			Points	Mult.
50 MHz.	437	x 1	=	437	49
144 MHz.	461	x 1	=	461	22
220 MHz.	27	x 2	=	54	9
432 MHz.	51	x 2	=	102	14
1296 MHz.	8	x 3	=	24	7
2304 MHz.	1	x 3	=	3	1
10 GHz.	3	x 3	=	9	3
TOTAL	988			1090	105

114,450 total points

This score is about two and a half times better than our previous best, and high enough to be in the top ten nationwide during the past several year's contests (although probably not this year with the improved propagation).

It should also be mentioned that we had half a day of good weather when holes in the clouds appeared on Saturday allowing us to see the terrific view from the summit. Then it was back to the dreary fog that we have had every other time we've been on the summit.

Taking part in this year's expedition were K1TK, K1UR, K1OGF, WA1PQY, WA1YOJ, WA1ZLQ, WA1YAU, WB1BUM, W1OOP, AF1M, and N2AWG. □

UHF CONTEST

by Nels Anderson, K1UR

As if we couldn't get enought of Vermont, K1TK, K1UR, K1OGF, and N2AWG were back on Mt. Equinox the weekend of August 8 and 9 for the UHF Contest. As was done last year when we traveled only to Mt. Wachusett, this contest was operated as a tune-up for the upcoming September VHF contest and a chance to try out new equipment.

The main piece of new equipment was a bay of four 17 element yagis for 432 MHz built by K1TK and N2AWG and with a phasing harness by K1OGF. After our previous problems with wooden antennas on two meters, these were assembled completely out of aluminum and came out quite sturdy. Once assembled properly, they were found to work as good as they look. Although no spectacular contacts were made on 432, testing indicated the good gain and tight beamwidth to be expected from a 68 element antenna. We also finally came up with a power supply for the 432 amplifier K1UR put together and the amp worked well until the power supply capacitors blew out (see why we need a tune-up for the big contest?). With everything operating in September, we should be in very good shape on 432.

Our other piece of new equipment is a 30 inch dish which WA1YOJ managed to procure. Limited testing seemed to show that the feed built by K1TK is going to work, so we should now have a greater range on 10 GHz (if we can figure how to aim the thing).

The contest itself went much better than last year, when we only made four contacts. Multipliers for this contest are rectangles of one degree latitude by one degree longitude so results are not directly comparable to the VHF contests. Band by band, we did as follows:

BAND	QSOs	Points	Mult.
220 MHz.	2 x 3 =	6	1
432 MHz.	32 x 3 =	96	16
10 GHz.	3 x 12 =	36	2
TOTAL	37	138	10

2622 total points.

Operation was done from K1UR's new rolling hamshack (van) also being tried out for the first time. We were again surprized by some nice weather both Saturday and Sunday which made operation much more pleasant.

Don't forget, the September VHF QSO Party to be held September 12 and 13 from Mt. Equinox. □

hr REPORT

Mobile operations by cows was authorized by the Commission in a July 16 action, which permits a Longmont, Colorado, dairy farmer to put 2.5 or 6 MHz rigs on his cows to facilitate herd management.

hr Report, July 24, 1981

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Dentron filed for Chapter 11 protection under the bankruptcy laws on June 25. Citing high interest rates on operating capital and a slowdown in the economy as reasons for his company's problems, Dentron President Denny Had said that Dentron is in a good backlog situation and his Stow, Ohio, plant is in full operation.

hr Report, July 24, 1981□

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The deadline for the next Spark Gap is September 15.

FIELD DAY!

by Nels Anderson, K1UR

For Field Day 1981 the Wellesley Amateur Radio Society returned to beautiful Peaked Hill in Chilmark on Martha's Vineyard where we had previously operated from in 1979. This site, the highest point on the island, once again provided a good location to test out our emergency preparedness capabilities.

The trip to the Vineyard began Friday night, June 26, and we arrived on the island late that evening aboard the ferry. Upon arriving at the site, we found it pretty much as it was two years earlier and the extremely clear night gave us a good view of the island and the stars. Tents were set up and the pre-Field Day card games began.

Saturday morning we set up two 30 foot towers each with a tri-bander, an 80 meter dipole, and the K1TK 4 element, 40 meter wire beam. All set up of stations was again completed before the designated starting time of 2:00 pm, equalling our feat of two weeks earlier at the VHF contest.

Operation commenced right on time and later included another tower for 6 and 2 meters. WB1BUM also got out his solar powered station and over the course of the weekend made the required five contacts for the natural power bonus using his TR-33C and a two element quad on 146.52.

The VHF bands did not prove to be too prolific but HF worked out quite well and we came away at the end of the weekend with reasonable results. A good job was done spreading out the operation over the five HF bands so that the easy opportunities to work the big stations on each band were not missed. All bonuses except for message relaying were also achieved.

Probably a larger QSO total could have been achieved, except the weather was actually too nice. It was very difficult to climb into a stuffy tent with a hot radio when the weather was absolutely perfect outside. Many people did take advantage of the weather and the pleasures of the island with bike and car trips to the beaches and other natural and man-made wonders of the Vineyard. Even if little operati was done by some, it was hard not to enjoy oneself with the good weather and good food provided by WA1ZLQ.

C.J. McDonald, WB1BUM, operating on 146.52 using his solar power array.

This will probably be our last trip to the Vineyard, at least to this particular spot, due to the problems with the town commission in charge of such things. Much confusion took place before we received permission to use the site only two days before Field Day, as we had thought permission had already been given several months in advance. Even after our arrival, word had not been spread to all the necessary authorities that permission had been granted. Still, if we should want to come again, there are other possible sites that may be available. In any event, our contact on the island, Dave Dunham, WA1CUH, deserves our thanks for all his efforts in helping us make contact with the necessary officials on the island both this year and in past years. Without his help, this Field Day trip would not have been possible.

This years Field Day crew included K1TK, K1UR, K1OGF, WA1PQY, WA1YOJ, WA1YAU, WA1ZLQ, WB1BUM, N1ADY, KA1IU,

AF1M, N2AWG, and WA2EHV.

As for our final score, the results came out as follows:

Band	QSOs	Points
75 SSB	104	104
80 CW	75	150
40 SSB	29	29
40 CW	116	232
20 SSB	50	50
20 CW	142	284
15 SSB	17	17
15 CW	73	146
10 SSB	112	112
2 SSB	13	13
Novice	1	2
OSCAR 8	1	2
Solar	5	5
TOTAL	738	1146

Final score:
1146 x 2 + 600 bonus = 2892

ELECTRONICS EXCHANGE

For Sale: Icom IC-22S diode programmed synthesized 2 meter FM transceiver with Icom PS3A power supply. Asking $250 for both. Contact Gene Balinski, WA1UXA, at 603-888-1744. □

hr REPORT

FCC's RFI staff report was finally issued July 16, and the 92-page document contains a number of inferences and suggestions that should cause concern in the Amateur community. Although the report cites CB radio as the greatest single source of RFI complaints, Amateur Radio is almost invariably mentioned along with CB in discussions of problems and solutions. "The problems created by radio frequency interference (RFI) are serious and getting worse," the report's chapter on recommendations begins, and then in the very next paragraph it states, "A significant part of the RFI problem is TV receiver overload caused by CB radio (and to a lesser extent amateur radio)."

Among the proposed solutions (to TV set overload by CB radio) are mandatory or voluntary TV receiver standards and TV receiver labeling (as to performance). Another option would be to set a combined transmitter/receiver limited liability, which could (for the transmitter operator) include adding filters, limiting antenna height (or direction), quiet hours, or even compensating the person interfered with! Another option, even more onerous, would place all burden for TVI resolution on the transmitter operator.

This last interference "remedy" comes up several times in the Commission's staff report, and would certainly be very objectionable to the Amateur service. With it an Amateur could be forced to reduce power, move or modify antennas, avoid certain bands, or even give up operating entirely in order to resolve an interference problem. This alternative does seem to have some support, however, as it comes within the present authority of the FCC. The alternative remedy, regulation to require better interference rejection by home entertainment devices, is one that would require new legislation, such as Senator Goldwater's bill, S 929, discussed in the May "Spark Gap".

A further Notice of Inquiry on the RFI question, General Docket 78-369, was issued along with the staff report. Comments on the questions cited above and others raised in the report are due at the Commission September 30; reply comments will be due on November 16.

hr Report, August 7, 1981

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Strong organized support for Amateur Radio is proposed by a newly formed group in California, the Society for the Protection of Amateur Radio. SPAR, the brainchild of K6QYO and W6POU (Santa Barbara County SCM), states as its purpose "to support... the interests of Amateur Radio as defined by the ARRL, with the strongest possible political action against harmful regulation and legislation, and to support that...which is beneficial." SPAR says it will support Amateur Radio through organized letter writing campaigns, introducing legislation and legal actions...

hr Report, August 7, 1981□

Dues Dues Dues...

With the start of the new club year your dues are due. The dues will remain at $8.00 and may be paid at any club meeting (the first and third Thursdays of the month) or may be sent by mail to the new club treasurer, C.J. McDonald, WB1BUM, 48 Hale Street, Newton, Mass. 02164. Please try to pay your dues promptly. □

Hearabouts....

Bill Hanlon is heading a committee that will be looking into the by-laws of the club. Meetings will be held just before regular club meetings. If you are interested in participating in these discussions, contact Bill at 384-8056. □

OFFICIAL BULLETIN

Nr 85, dated August 20, 1981:

The new edition of the ARRL Net Directory is now available. Listing over 1000 public service nets by location and frequency, this newly revised booklet is also packed with information on all the basics of traffic handling and net operation. You may obtain a copy by sending a self addressed nine by twelve inch envelope with sixty nine cents U.S. postage to ARRL Net Directory, 225 Main Street, Newington, Conn. 06111. □

EVENTS

The upcoming year plans are now being set and will be discussed and the calendar of events finalized at the September 3 meeting. This year we will be as busy as ever, with a line-up of events designed to please any member of the Amateur fraternity. During the September 3 meeting we will also discuss and vote on the budget for the upcoming year. Both of these topics are very important, so plan on being there September 3.

Coming up at the October 15 meeting, we will have K1TK and K1UR as speakers on the topic of Gunnplexers. As "Spark Gap" readers know, they have been using these 10 GHz rigs as part of the WARS VHF contests and have done other experimentation with them. Plan now to be there October 15 for this talk on one of our most exotic bands. □

5 YEARS AGO IN The Spark Gap

One of the first issues of the "Spark Gap" went to press five years ago. Edited by Jim Hatherley, WA1TBY, and printed by Joe McGrath, WA1JIR, this issue was four pages plus another page containing the calendar of events all printed on yellow paper. Those of you used to the current WARS newsletter would not recognize it and in fact, it was changed to the present format after only one more issue.

In that issue, we find a letter by club President Don Chesley, WA1HVS, on the upcoming events for the 1976/77 club year. These included a 25th anniversary open house in the upstairs Communications Center in November, and of course, the message fair.

Also included were the activities of a number of the club members during the summer, a short article on Field Day, and a number of announcements on upcoming activities. □

OFFICERS

PRESIDENT:
David Curry, K1TK, 756-5325
VICE PRESIDENT:
Dick Paret, WA1ZLQ, 762-5074
TREASURER:
C.J. McDonald, WB1BUM, 332-6091
RECORDING SECRETARY:
Nels Anderson, K1UR, 323-5029
CORRESPONDING SECRETARY:
Saul Dinman, K1PDX, 358-2519
FUND RAISING:
Kevin Kelly, WA1YHV, 242-0341
OPERATING ACTIVITIES:
David Kent, N2AWG, 756-5325

BIGGER and BETTER THAN EVER!

HAM RADIO TAILGATE FLEA MARKET

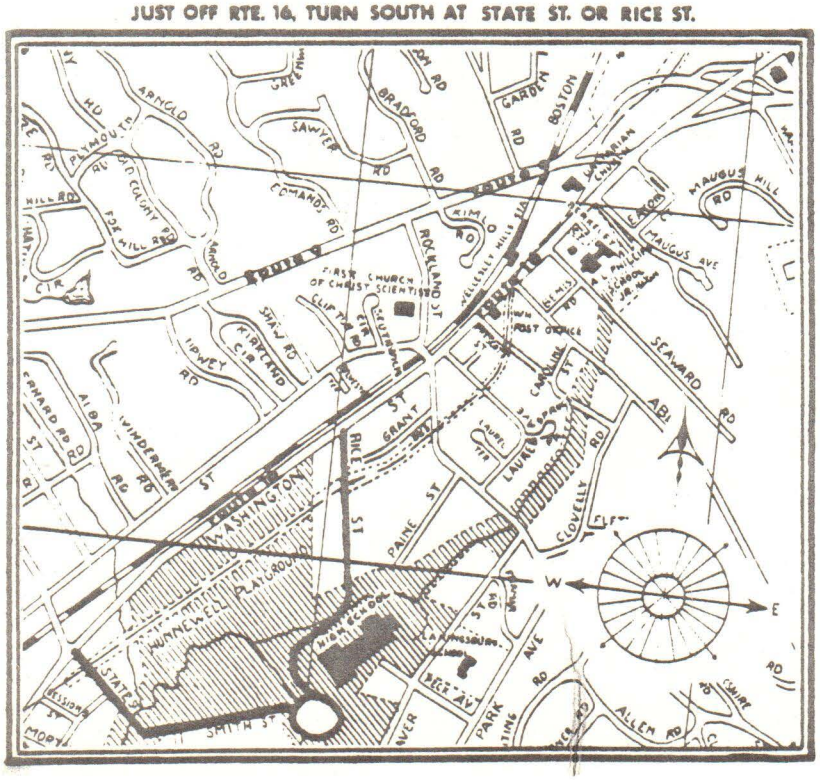
SATURDAY OCT. 10

Starts at 9am

THE PLACE –

WELLESLEY HIGH SCHOOL
50 Rice Street

JUST OFF RTE. 16, TURN SOUTH AT STATE ST. OR RICE ST.



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WITKZ

Admission:
$1 for buyers and sellers

Talk-in 147.03

INFO 323-5029

Be there!

TRI DECA FEST

Sept. 17 at 7:00 p.m.

The Spark Gap

WELLESLEY AMATEUR RADIO SOCIETY

324 Washington Street
Wellesley Hills, Massachusetts 02181

FIRST CLASS MAIL

THIRTIETH ANNIVERSARY